



Bridges and Tunnels

March 13, 2003

Docket Clerk
Federal Communications Commission
445 12th Street, SW., TW-A325
Washington, DC 20554

Re: **WT Docket No. 01-90**

Dear Madam/Sir:

MTA Bridges & Tunnels (the Authority) is respectfully submitting the attached comments to the Notice of Proposed Rule Making (NPRM) for governing the licensing and use of the 5.850-5.925 GHz band (5.9 GHz band) for Dedicated Short Range Communications (DSRC) service in Intelligent Transportation System (ITS) applications.

As one of the largest toll authorities in the world, the Authority has been at the forefront in promoting DSRC applications for ITS services, and an active participant in the standards setting groups. It is also one of the founders of the E-ZPass Inter-agency Group (IAG), a group of 21 transportation agencies across seven states in the Northeastern United States responsible for deployment and integration of DSRC systems. The IAG was established to provide a seamless and integrated service to customers throughout the region with an interoperable electronic toll collection (ETC) system.

E-ZPass has had steady and continuing growth both in market size and customer satisfaction, and is one of the largest ETC programs in the worked. The Authority alone has distributed over 3 million E-ZPass tags, investing over \$335 million in the development and installation and 75% of all our toll transactions are now through E-ZPass.

Therefore, we are closely following the 5.9GHz DSRC ruling for any impact it might have on our customers and our capital investment in infrastructure. We believe that 5.9GHz band should not represent a replacement for 900 MHz DSRC operations at any time in the foreseeable future. We feel that the two bands need to coexist until such time as our customers, and others using 900 MHz DSRC, can realize the additional benefits of 5.9 GHz over 900 MHz and fully migrate to the new products and services provided at 5.9 GHz. In other words, the ruling should provide for operations in the 900 MHz DSRC band to continue indefinitely in order to allow a viable and orderly transition to the new band.

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We are also looking toward the private sector to stimulate commercial interest. The establishment of a customer base should occur using an open DSRC standard that will alleviate the dependence on proprietary devices, which restricts interoperability, increases costs and limit participation and competition.

With these conditions, the Authority strongly supports the new 5.9 GHz band allocation. We believe it minimizes unnecessary costs and provides important value added services to our customers, particularly in the area of safety.

Our comments on this DSRC NPRM are based on the extensive experience we gained so far from the implementation and operation of E-ZPass and a vision of the valuable services that can be provided to our customers and others with the adoption of the new standard. With this perspective, we respectfully submit our comments on the key issues, in the attachment that follows.

Thank you for the opportunity to comment on this valuable initiative.

Sincerely,

A handwritten signature in cursive script, appearing to read "Michael C. Ascher".

Michael C. Ascher
President

Enclosure

Standards and Interoperability Issues: (NPRM Section III A, C):

The Authority strongly supports the adoption by the FCC of the ASTM E2213-02 DSRC Standard. We also recommend the licensing and service rules for the band specifies compliance with Layer 1 (the Physical Layer) and Layer 2 (the Medium Access Control) of the ASTM E2213-02 DSRC Standard. The adoption of this standard by the FCC will serve the best interests of customers, service providers, developers and equipment manufacturers. Compliance with a national standard for DSRC systems will ensure interoperability, competition and market growth. It will reduce component and installation costs and shorten the time lag between product and service development and the marketplace.

The ASTM E2213-02 DSRC open standard based on the widely used Institute of Electrical and Electronic Engineers 802.11 and 802.11a wireless communications standards, would encourage competition, innovation and product development. It is the result of rigorous and concerted efforts of the international scientific, manufacturing and user communities. It would provide both existing vendors and new comers access to a broader market through interoperability and compatibility while enabling them to compete on a common platform. The cost of new applications and services development would be reduced by not requiring the utilization of proprietary technology or the payment of licensing fees.

We recommend that the rules specifying interoperability include equipment compatibility as well. DSRC devices operating in the 5.9 GHz should be type certified and licensed by rule. These measures are critical steps for achieving national interoperability in DSRC applications in the 5.9 GHz Band.

Any future development or implementation of the DSRC standard on the 5.9 GHz band should take into consideration the success of the E-ZPass systems operating in the 900 MHz band. The Authority has distributed over 3 million tags to its customers and invested over \$ 335 M in the development and installation of its existing E-ZPass infrastructure. DSRC applications under both the existing 900MHz and future 5.9GHz should coexist during a gradual transition phase to protect the current investments. We plan to provide support for both systems during this transition phase, by carefully balancing the needs of our customers utilizing both bands. The ruling should permit operators of 900 MHz DSRC equipment to continue operating in that band indefinitely.

Service Definition and Eligibility: (NPRM Section III A, B)

We believe the definition of "public safety radio services" in the ruling should be broad enough to include Electronic Toll Collection provided by toll agencies.

The Authority is engaged in its day-to-day activities with the protection of the safety of thousands of its customers as they travel across our seven bridges and two tunnels. We have a 24/7 Operations Command Center in direct contact with the New York City Office of Emergency Management's Command Center. Our facility operators monitor traffic

flow to prevent accidents, respond quickly to our customers' calls during emergencies as well as detect and clear incidents. These activities often require extensive coordination among the agencies using all available communications media such as wireless phones, radio and fax.

We routinely exchange traffic data with emergency management and law enforcement agencies and provide safety related traveler information to our customers in emergency situations. We use various ITS communications media including radio and variable message signs to transmit messages including advance warnings and traveler advisories. We plan and coordinate these activities with safety, law enforcement and regional transportation agencies. We believe these critical public safety roles qualify the Authority and other toll agencies for coverage under the "public safety radio services" definition category of the ruling.

We urge the FCC to grant the toll industry the same level of protection that is given in the NPRM to other public safety services providers. We also believe the 5.9 GHz band will improve our communications with our customers, emergency vehicles, police, fire, and medical personnel and our ability to manage major incidents, promote safety and save lives and property. We expect the toll agencies to play a key role in delivering these and other public safety services in the 5.9 GHz band.

Finally, in this category we also recommend to FCC the following:

- Replace the term "commercial" environments with "private environments".
- Designate the band for shared public safety and private services, with public safety given priority in usage. This will promote both regional and national interoperability, and enhance product and service development and market growth in the 5.9 GHz band.
- Adopt different set of rules for public safety vis-à-vis private use.
- Delete the word "non-voice" from the current FCC definition. As telematics and in-vehicle communications services continue to develop, it is quite likely that ITS applications using "store and forward" or text-to-voice messaging systems could be developed and grow. The "non-voice" provision will unnecessarily exclude these features, and should be deleted.

Licensing Rules: (NPRM Section III E, F, G, H):

We recommend that auctions not be used to issue licenses for operating in the 5.9 GHz Band. We believe band auctioning will be counterproductive to the goal of spurring market growth. Auctioning could generate speculation and warehousing of such a valuable spectrum, and deny users access or discourage them from developing applications. They may also use pricing and other schemes to direct these valuable spectrums to those service providers, who may have a symbiotic relationship with them.

We recommend that the FCC permit private, non-safety related DSRC operations in the 5.9 GHz band. The private use of some channels in the band will promote the widespread deployment of OBUs and relieve the public sector of the need to establish the

infrastructure. The FCC should assure licenses for public safety and electronic toll agencies such as ours. Remaining licenses should be granted provided they meet all of the applicable requirements of the ruling. The license should provide them the right to operate on a site-specific basis within a designated class of “communications zone”.

The Authority and others like it, which operate more than one toll facility in a wider geographic area, should be granted a “corridor”, “ribbon” or geographic license. This will minimize unnecessary administrative burden both for the operating agencies and the FCC or its designated frequency coordinator of issuing site licenses. The Authority has seven bridges and two tunnels spread out in a wide geographic area in the New York Metropolitan Region. It will be easier for us if we are granted one geographic license to operate in the region or perhaps two or three “corridor” licenses. Overlapping jurisdictions can be accommodated within the same corridor through the use of different channels or through the control channel.

We recommend that a licensing regime or Commission be established which would administer and coordinate licensing and spectrum allocations in the 5.9 GHz band. We believe this will remove unnecessary burden on the FCC. This administrative body should include FCC-certified frequency coordinators. The frequency coordinators would recommend appropriate frequencies/channel assignments, process applications and implement necessary measures to control potential interferences. The administrative body should also serve to protect the band from use by unlicensed operators.

The licenses for Road Side Units (RSUs) should be granted on a site-by-site basis with each RSU corresponding to a specifically defined “communications zone”. However, public agencies with facilities across a wide geographic area should be able to obtain a single “geographic” license to operate within an appropriately defined “communications zone”. Again, this would save an unnecessary administrative burden. We urge the FCC to use the DSRC device classes for the RSU and transmission power ranges that are proposed in the ASTM E2213-02 DSRC standard, as a frame of reference for issuing appropriate licenses to applicants.

To ensure national interoperability OBUs in the 5.9 GHz band must be manufactured and tested in conformance with a nationally accepted standard. We strongly urge OBUs operating in the 5.9 GHz band be licensed by rule. As DSRC applications for ITS grows, millions of vehicles would be equipped with OBUs. Licensing each of these units individually would be impractical, inefficient and costly and slow development and production of devices by OEMs. Alternatively, licensing by rule of these devices could enhance the development of new products and services and spur market growth. We believe that organizations such as OmniAir, an affiliate of the International Bridge, Tunnel and Turnpike Association, can certify that DSRC components meet all applicable standards. This could avoid unnecessary, costly and repetitive testing by both users and integrators.

Band Channelization Plan: (NPRM Section III D):

We support the division of the 75 MHz spectrum in the 5.9 GHz Band into seven channels, each 10 MHz wide. The remaining 5 MHz Band should be reserved for future

use, as proposed in the ASTM E2213-02 DSRC standard. One of the seven channels should be used as a “Control Channel” and the remaining six channels should be designated as “Service Channels”. All public or private users should operate on a shared basis across the spectrum (both in the control and service channels), rather than be granted discrete channel designations.

The Control Channel should be used for transmitting short messages (less than 200 microseconds) such as public safety related emergency broadcasts and announcements to all OBUs operating in any public safety designated “communications zone”. Public safety and private users can share the Control Channel as long as the message duration is limited to less than 200 microseconds in intervals of no less than 2 seconds. This will ensure that the public safety warning announcements are received by all OBUs operating within that particular public safety “communications zone”. However, we recommend that public safety warning messages have priority on the Control Channel over private messages. These rules will be critical to ensure that emergency messages or broadcasts are transmitted timely and effectively to all potentially affected vehicles and the public at large.

End of comments.